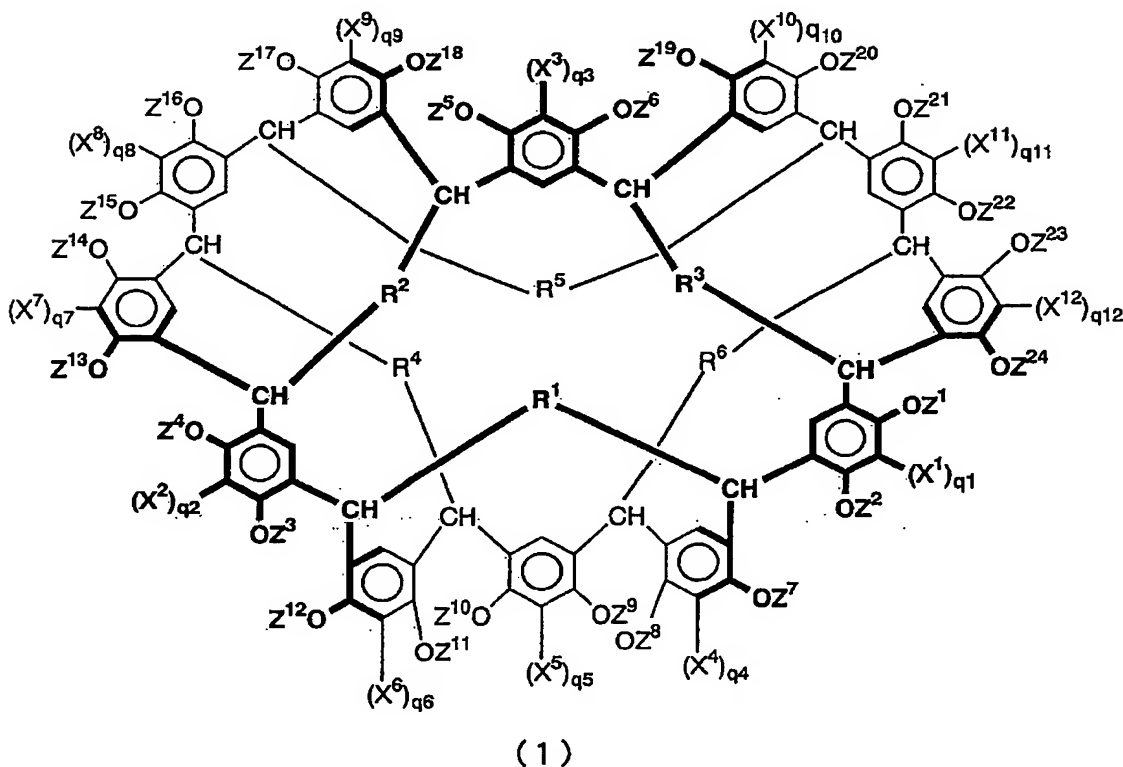


# IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A calixarene compound shown by following formula (1):

[Formula-1]



wherein R<sup>1</sup> to R<sup>6</sup> individually represent a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms; X<sup>1</sup> to X<sup>12</sup> individually represent a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxyl group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group; Z<sup>1</sup> to Z<sup>24</sup> individually represent a hydrogen atom, a group having a

polymerizable functional group, a group having an alkali-soluble group, or a substituted alkyl group having an alkyl chain with a 1 to 8 carbon atom content, or two adjacent Zs in combination represent a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms;  $q^1$  to  $q^{12}$  individually represent an integer of 0 or 1.

Claim 2 (Original): The calixarene compound according to claim 1, wherein  $X^1$  to  $X^{12}$  in the formula (1) are methyl groups.

Claim 3 (Original): The calixarene compound according to claim 1, wherein  $q^1$  to  $q^{12}$  in the formula (1) are 0.

Claim 4 (Currently Amended): The calixarene compound according to ~~any one of~~ ~~claims~~ claim 1 to 3, wherein  $R^1$  to  $R^6$  are individually an alkylene group having 3, 5, 7, or 8 carbon atoms.

Claim 5 (Currently Amended): The calixarene compound according to ~~any one of~~ ~~claims~~ claim 1 to 4, wherein all of the  $Z^1$  to  $Z^{24}$  groups in the formula (1) are hydrogen atoms.

Claim 6 (Currently Amended): The calixarene compound according to ~~any one of~~ ~~claims~~ claim 1 to 4, wherein at least one of the  $Z^1$  to  $Z^{24}$  groups in the formula (1) is a group other than hydrogen atom.

Claim 7 (Original): The calixarene compound according to claim 6, wherein at least one of the  $Z^1$  to  $Z^{24}$  groups in the formula (1) has a polymerizable functional group.

Claim 8 (Original): The calixarene compound according to claim 7, wherein the polymerizable functional group is a polymerizable unsaturated group and/or a cyclic ether group.

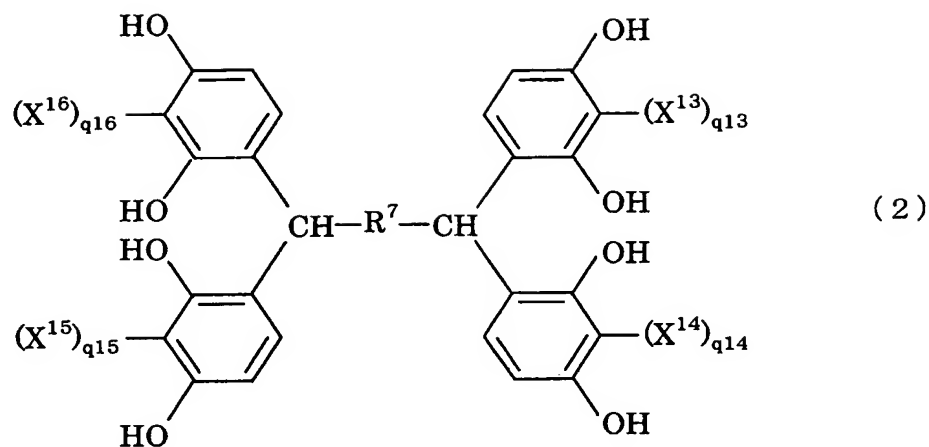
Claim 9 (Currently Amended): The calixarene compound according to ~~any one of~~ ~~claims~~ claim 6 to 8, wherein at least one of the  $Z^1$  to  $Z^{24}$  groups in the formula (1) has an alkali-soluble group.

Claim 10 (Original): The calixarene derivative according to claim 9, wherein the alkali-soluble group is at least one group selected from the group consisting of a carboxyl group, amino group, sulfonamide group, sulfonic acid group, and phosphoric acid group.

Claim 11 (Currently Amended): The calixarene derivative according to ~~any one of~~ ~~claims~~ claim 6 to 10, wherein at least one of the groups among  $Z^1$  to  $Z^{24}$  in the formula (1) has both a polymerizable functional group and an alkali-soluble group.

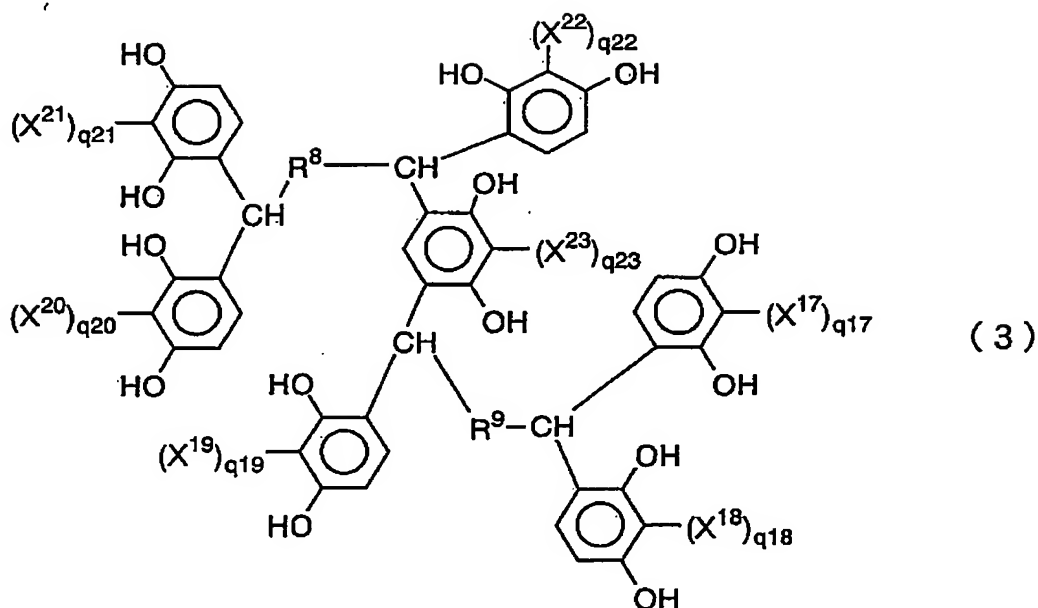
Claim 12 (Currently Amended): At least one intermediate of a calixarene compound selected from the group shown by the following formulas (2), to (8):

[Formula-2]



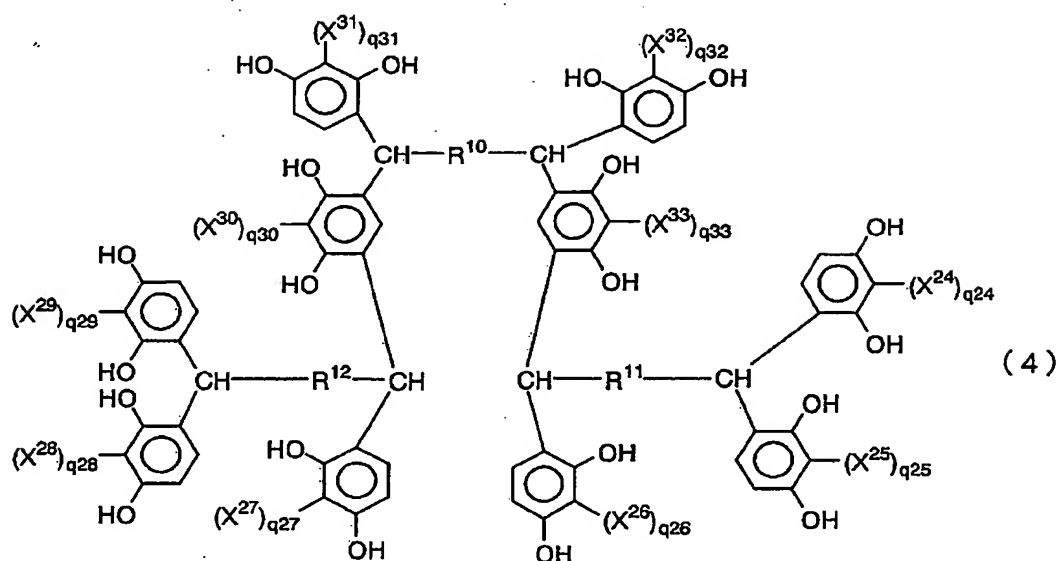
wherein  $R^7$  represents a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms;  $X^{13}$  to  $X^{16}$  individually represent a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxyl group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group; and  $q^{13}$  to  $q^{16}$  individually represent an integer of 0 or 1,

[Formula 3]



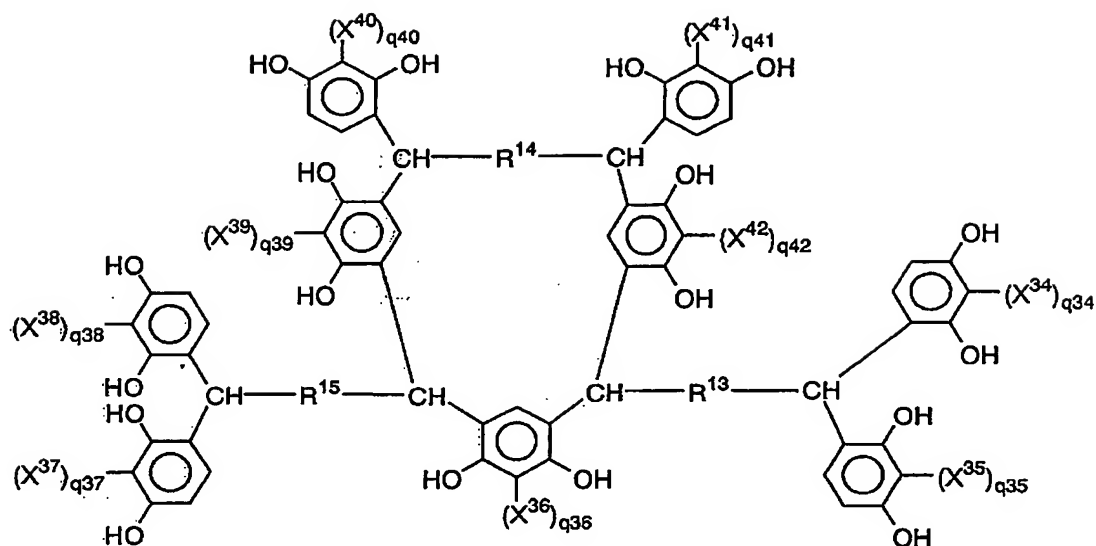
wherein  $R^8$  and  $R^9$  individually represent a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms;  $X^{17}$  to  $X^{23}$  individually represent a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxyl group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group; and  $q^{17}$  to  $q^{23}$  individually represent an integer of 0 or 1,

[Formula 4]



wherein  $R^{10}$  to  $R^{12}$  individually represent a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms;  $X^{24}$  to  $X^{33}$  individually represent a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxy group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group;  $q^{24}$  to  $q^{33}$  individually represent an integer of 0 or 1,

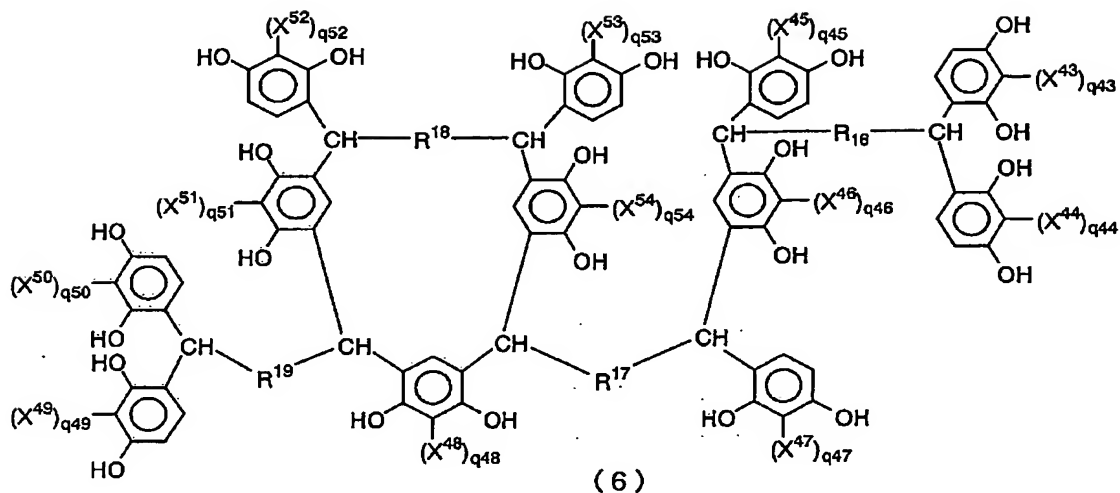
~~[Formula 5]~~



(5)

wherein R<sup>13</sup> to R<sup>15</sup> individually represent a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms; X<sup>34</sup> to X<sup>42</sup> individually represent a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxyl group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group; and q<sup>34</sup> to q<sup>42</sup> individually represent an integer of 0 or 1,

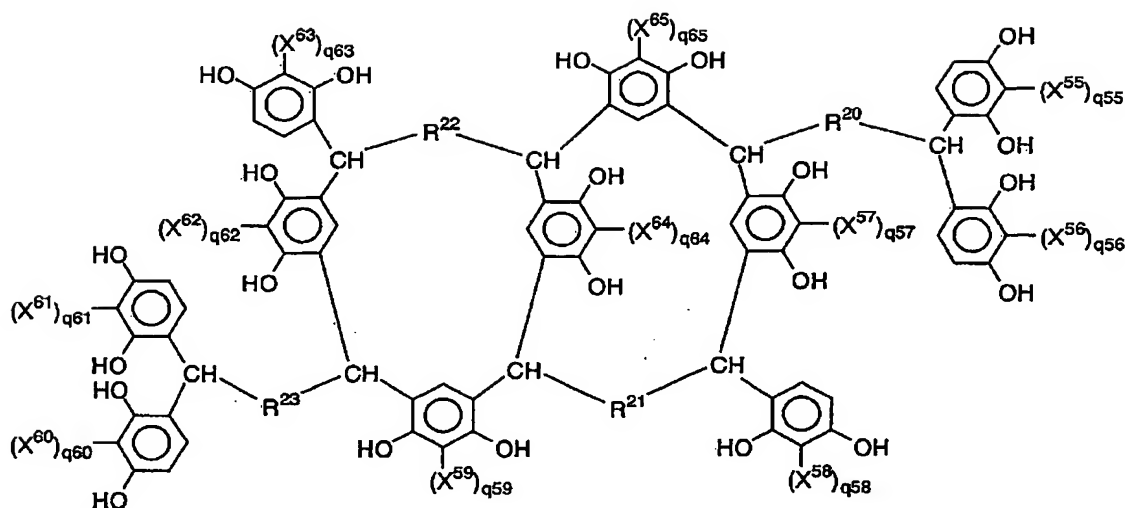
[Formula-6]



wherein  $R^{16}$  to  $R^{19}$  represent a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms;  $X^{43}$  to  $X^{54}$  individually represent a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxy group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group; and  $q^{43}$  to  $q^{54}$  individually represent an integer of 0 or 1,



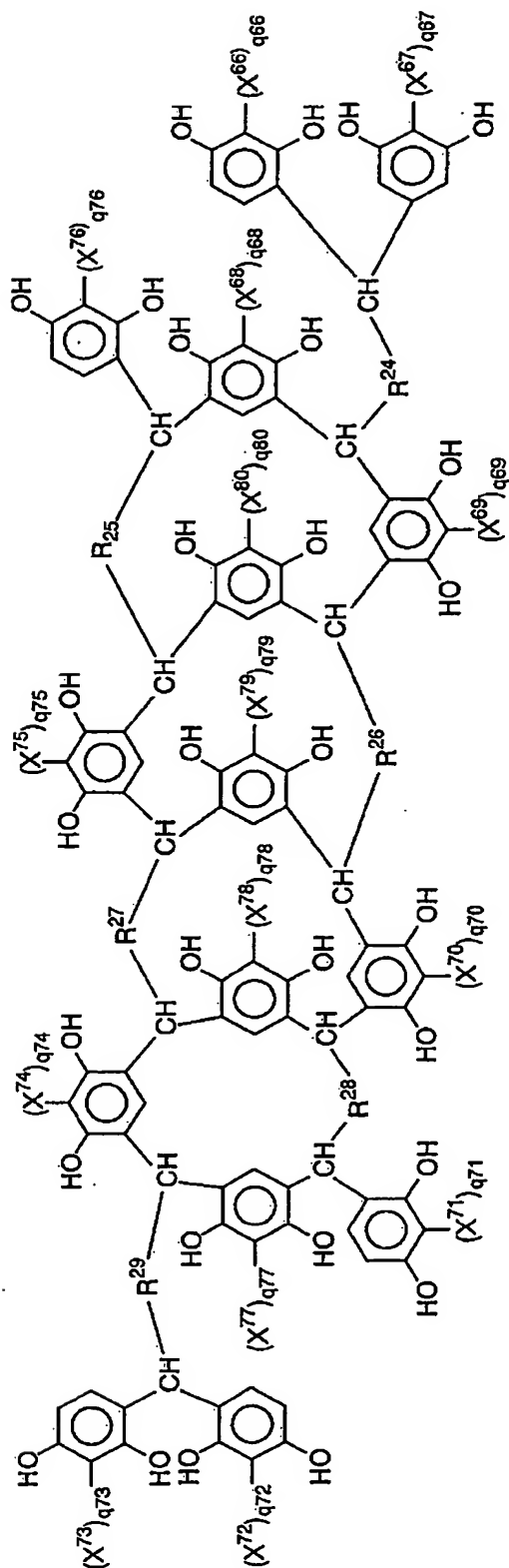
[Formula 7]



( 7 )

wherein  $R^{20}$  to  $R^{23}$  represent a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms;  $X^{55}$  to  $X^{65}$  individually represent a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxy group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group; and  $q^{55}$  to  $q^{65}$  individually represent an integer of 0 or 1,

[Formula 8]



( 8 )

wherein  $R^{24}$  to  $R^{29}$  represent a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms;;  $X^{66}$  to  $X^{80}$  individually represent a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxyl group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group; and  $q^{66}$  to  $q^{80}$  individually represent an integer of 0 or 1.

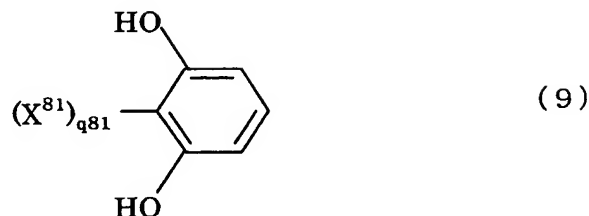
Claim 13 (Original): The intermediate of a calixarene compound according to claim 12, wherein  $X^{13}$  to  $X^{80}$  in the formulas (2) to (8) are methyl groups.

Claim 14 (Original): The intermediate of a calixarene compound according to claim 12, wherein  $q^{13}$  to  $q^{80}$  in the formulas (2) to (8) are 0.

Claim 15 (Currently Amended): The intermediate of a calixarene compound according to ~~any one of claims~~ claim 12 ~~to 14~~, wherein  $R^7$  to  $R^{29}$  in the formulas (2) to (8) are individually an alkylene group having 3, 5, 7, or 8 carbon atoms.

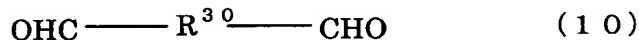
Claim 16 (Currently Amended): A method for manufacturing a calixarene compound comprising condensing at least one compound shown by the formula (9) and at least one compound shown by the formula (10):

~~[Formula 9]~~



wherein  $X^{81}$  represents a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxy group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group; and  $q^{81}$  is an integer of 0 or 1,

~~[Formula 10]~~



wherein  $R^{30}$  represents a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms.

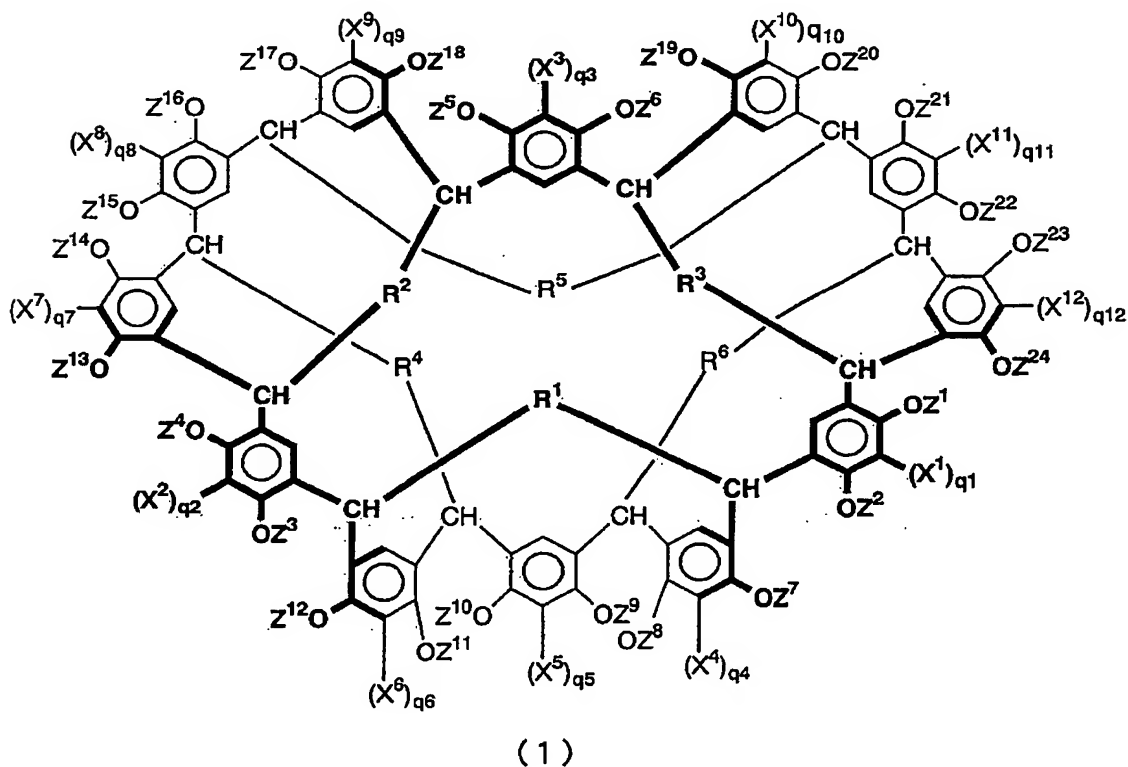
Claim 17 (Original): The method according to claim 16, wherein  $X^{81}$  in the formula (9) is a methyl group.

Claim 18 (Original): The method according to claim 16, wherein  $q^{81}$  in the formula (9) is 0.

Claim 19 (Currently Amended): The method according to ~~any one of claims claim~~ claim 16 to 18, wherein  $R^{30}$  in the formula (10) is an alkylene group having 3, 5, 7, or 8 carbon atoms.

Claim 20 (Currently Amended): A composition comprising a calixarene compound of the formula (1) claim 1 and a solvent which can dissolve the calixarene compound of the formula (1):

[Formula 11]



wherein R<sup>1</sup> to R<sup>6</sup> individually represent a substituted or unsubstituted alkylene group having 1-8 carbon atoms; X<sup>1</sup> to X<sup>12</sup> individually represent a substituted or unsubstituted alkyl group having 1 to 10 carbon atoms, a substituted or unsubstituted alkenyl group having 2 to 10 carbon atoms, a substituted or unsubstituted alkynyl group having 2 to 10 carbon atoms, a substituted or unsubstituted aralkyl group having 7 to 10 carbon atoms, a substituted or unsubstituted alkoxyl group having 1 to 10 carbon atoms, or a substituted or unsubstituted phenoxy group; Z<sup>1</sup> to Z<sup>24</sup> individually represent a hydrogen atom, a group having a

polymerizable functional group, a group having an alkali-soluble group, or a substituted alkyl group having an alkyl chain with a 1 to 8 carbon atom content, or two adjacent Zs in combination represent a substituted or unsubstituted alkylene group having 1 to 8 carbon atoms;  $q^1$  to  $q^{12}$  individually represent an integer of 0 or 1.

Claim 21 (Original): The composition according to claim 20, wherein the calixarene compound has a polymerizable functional group for at least one of the  $Z^1$  to  $Z^{24}$  groups in the formula (1) and the composition further comprises a polymerization initiator.

Claim 22 (Original): The composition according to claim 20, wherein the calixarene compound has an alkali-soluble group for at least one of the  $Z^1$  to  $Z^{24}$  groups in the formula (1).